CyberData

The IP Endpoint Company

Singlewire Paging Adapter Operations Guide

Part #*011280*

Document Part #*930729A*
for Firmware Version *3.0.0*

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Singlewire Paging Adapter Operations Guide 930729A
Part #011280

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Technical Support

The fastest way to get technical support for your VoIP product is to submit a VoIP Technical Support form at the following website:
http://www.cyberdata.net/support/contactsupportvoip.php

Phone: (831) 373-2601, Ext. 333
Email: support@cyberdata.net
Fax: (831) 373-4193
Company and product information is at **www.cyberdata.net**.

Revision Information

Revision 930729A, which corresponds to firmware version 3.0.0, was released on September 24, 2013.

Browsers Supported

The following browsers have been tested against firmware version 3.0.0:

- Internet Explorer (version: 10)
- Firefox (also called Mozilla Firefox) (version: 22.0)
- Chrome (version: 27.0.1453.116)
- Safari (version: 6.0.5)

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
13. Prior to installation, consult local building and electrical code requirements.

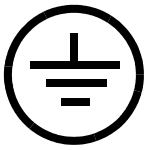
Warning

Electrical Hazard: This product should be installed by a licensed electrician according to all local electrical and building codes.

Warning

Electrical Hazard: To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

Pictorial Alert Icons

GENERAL ALERT	General Alert *This pictorial alert indicates a potentially hazardous situation. This alert will be followed by a hazard level heading and more specific information about the hazard.*
	Ground *This pictorial alert indicates the Earth grounding connection point.*

Hazard Levels

Danger: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This is limited to the most extreme situations.

Warning: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

Caution: Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It may also alert users against unsafe practices.

Notice: Indicates a statement of company policy (that is, a safety policy or protection of property).

The safety guidelines for the equipment in this manual do not purport to address all the safety issues of the equipment. It is the responsibility of the user to establish appropriate safety, ergonomic, and health practices and determine the applicability of regulatory limitations prior to use. Potential safety hazards are identified in this manual through the use of words Danger, Warning, and Caution, the specific hazard type, and pictorial alert icons.

Abbreviations and Terms

Abbreviation or Term	Definition
A-law	A standard companding algorithm, used in European digital communications systems to optimize, i.e., modify, the dynamic range of an analog signal for digitizing.
AVP	Audio Video Profile
Cat 5	TIA/EIA-568-B Category 5
DHCP	Dynamic Host Configuration Protocol
LAN	Local Area Network
LED	Light Emitting Diode
Mbps	Megabits per Second.
NTP	Network Time Protocol
PBX	Private Branch Exchange
PoE	Power over Ethernet (as per IEEE 802.3af standard)
RTFM	Reset Test Function Management
SIP	Session Initiated Protocol
u-law	A companding algorithm, primarily used in the digital telecommunication
UC	Unified Communications
VoIP	Voice over Internet Protocol

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1 Product Overview

The CyberData Singlewire Paging Adapter (SPA) is for use with Singlewire's paging and emergency notification software InformaCast® or InformaCast CK.

The Singlewire Paging Adapter provides a direct connection to legacy analog paging systems enabling Informacast paging events to be broadcast.

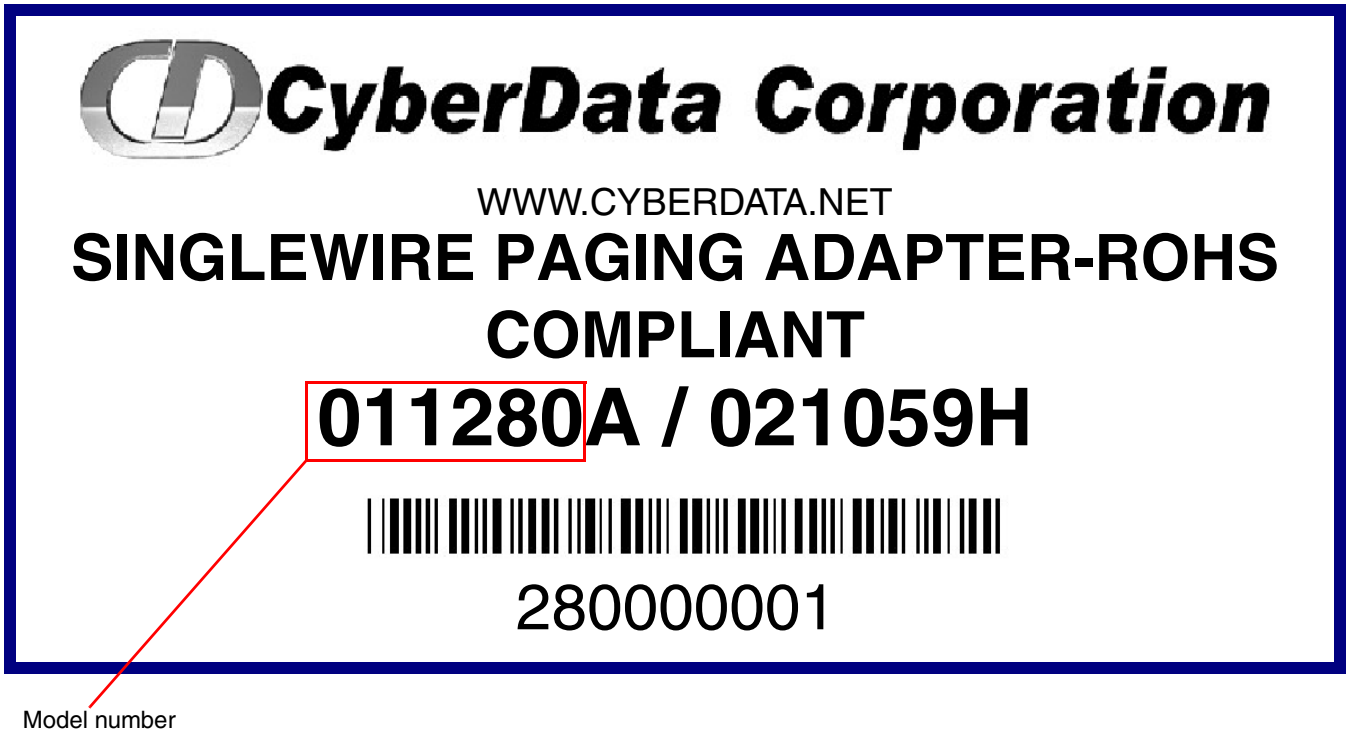
The on board relay can be controlled using InformaCast GPIO commands or can be set to activate when a page has begun.

The SPA supports a Line-In input for playing MOH from a remote source

1.1 How to Identify This Product

To identify the Singlewire Paging Adapter, look for a model number label similar to the one shown in Figure 1-1. The model number on the label should be **011280**.

Figure 1-1. Model Number Label



1.2 Product features

- InformaCast
- 10k Ohm line out and 600 Ohm connectors for interfacing with analog amplifiers
- Audio Codecs
  - G.711 U-law
  - G.711 A-law
  - Singlewire's proprietary "high quality" audio format.
- 802.11Q VLAN support
- Web-based configuration and firmware upload
- PoE 802.3af enabled (Power-over-Ethernet)
- 19-inch rack mount option

1.3 Product Specifications

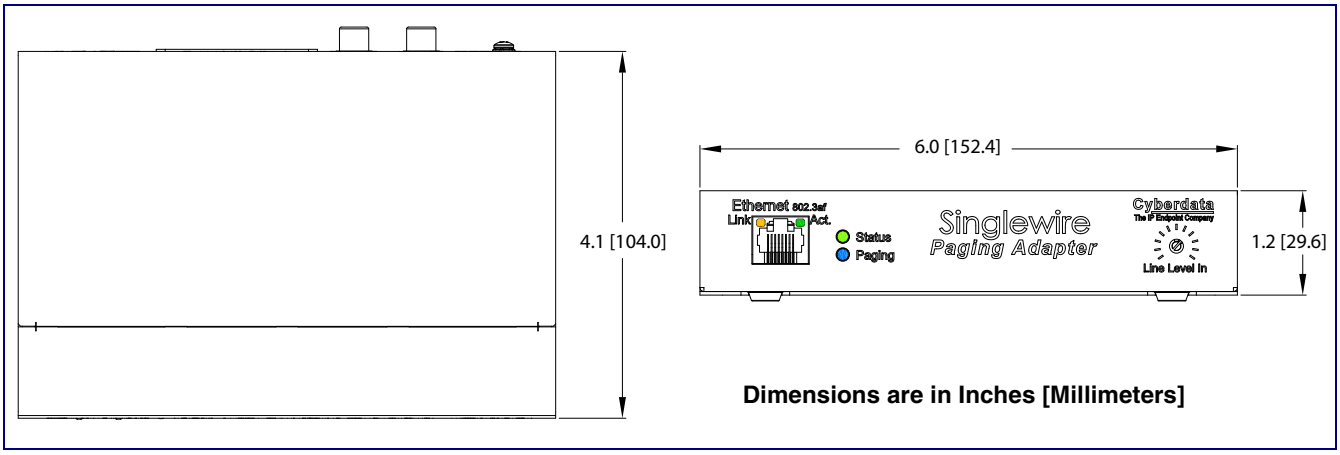
Table 1-1. Product Specifications

Specifications	
Protocol	Informacast 4.0 or later
Power Requirement	PoE or 48V DC
Ethernet I/F	10/100 Mbps
Power Input	PoE 802.3af or 48VDC
Operating Temperature	-10° C to 50° C (14° F to 122° F)
Payload Types	G711 Singlewire proprietary 'high quality' audio format
Regulatory Compliance	FCC Class A, UL 60950
Page Port Output	Balanced 600 Ohm 10VPP
Line In:	
Input Signal Amplitudes	2.0 VPP maximum
Input Impedance	10k Ohm
Line Out:	
Output Signal Amplitudes	2.0 VPP maximum
Output Level	+2dBm nominal
Total Harmonic Distortion	0.5% maximum
Output Impedance	10k Ohm
Dimensions	6.11” L x 4.05” W x 1.15” H
Weight	1.2 pounds
Boxed Weight	1.8 pounds
Part Number	011280

1.4 Dimensions

Figure 1-2 shows the dimensions for the Singlewire Paging Adapter.

Figure 1-2. Dimensions

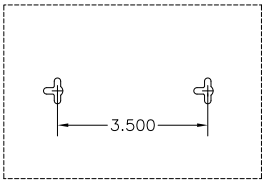
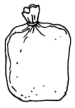


2 Installing the Singlewire Paging Adapter

2.1 Parts List

The packaging for the Singlewire Paging Adapter includes the parts in Table 2-2.

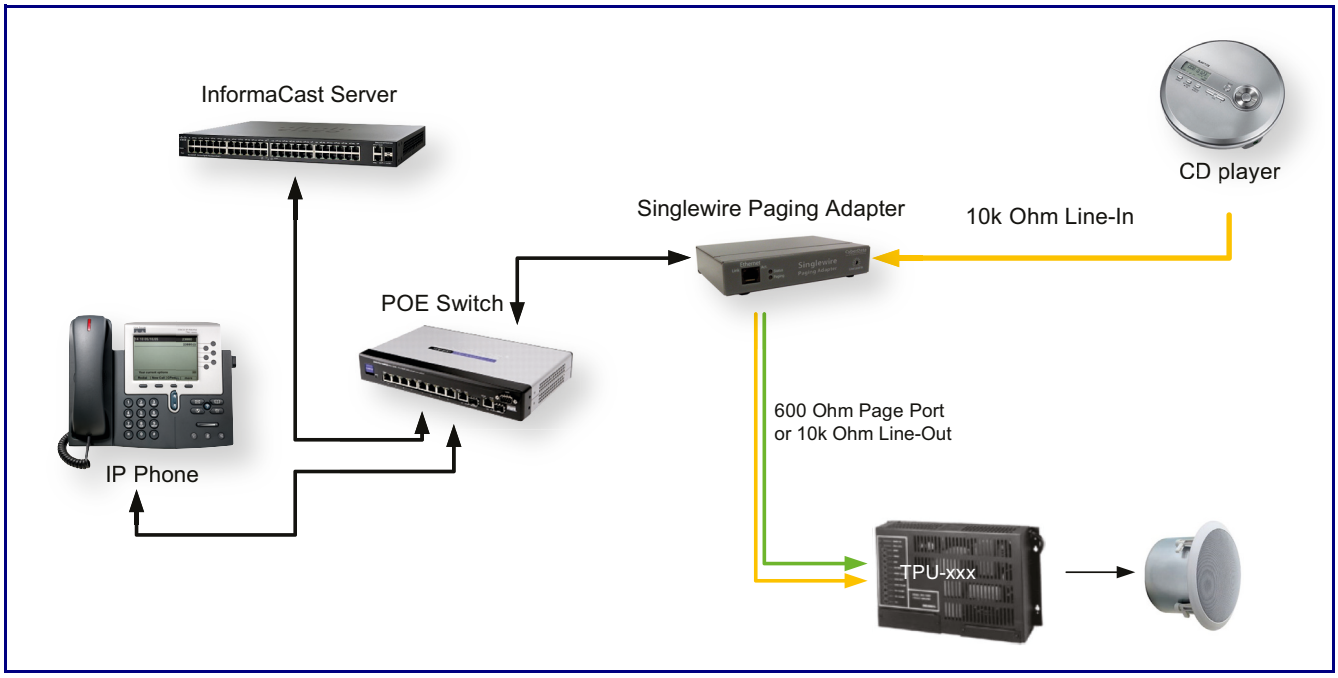
Table 2-2. Parts List

Quantity	Part Name	Illustration
1	Singlewire Paging Adapter	
1	Installation Quick Reference Guide	
1	Mounting Template (located on the last page of the *Installation Quick Reference*)	
1	Mounting Kit (part #070057A) which includes: (2) #4-6 x 7/8" Mounting Anchors (2) #4 x 1-1/4" Round Phillips Wood Screws	

2.2 Installation

Figure 2-3 illustrates a typical configurations for the Singlewire Paging Adapter.

Figure 2-3. Typical SPA Configuration (600 Ohm Output)



2.3 Connecting the Singlewire Paging Adapter

Before you connect the Singlewire Paging Adapter, be sure that you have received all of the parts described in Section 2.1, "Parts List".

2.3.1 Connection Options

See Figure 2-4 and Table 2-1 for the connection options that are available for the Singlewire Paging Adapter.

Figure 2-4. Connection Options

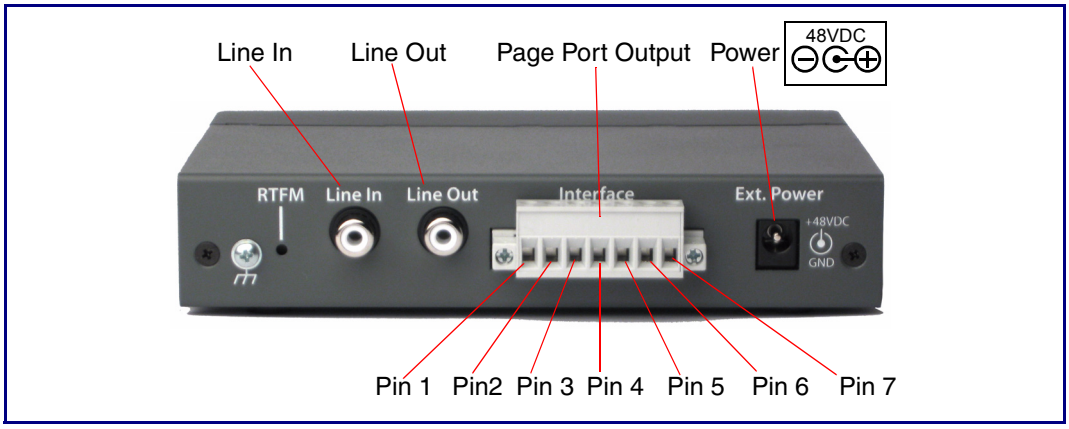


Table 2-1. Page Port Output Connections

Pin	Description
1	Unused
2	Unused
3	Positive 600-Ohm Audio Output[a]. See Section 2.3.1.1, "Pin 3, 4, and 5—Positive/Negative 600-Ohm Audio Output/Audio Ground Reference".
4	Negative 600-Ohm Audio Output.[a]. See Section 2.3.1.1, "Pin 3, 4, and 5—Positive/Negative 600-Ohm Audio Output/Audio Ground Reference".
5	Audio Ground Reference. See Section 2.3.1.1, "Pin 3, 4, and 5—Positive/Negative 600-Ohm Audio Output/Audio Ground Reference".
6	Relay Contact - Common[b]. See Section 2.3.1.2, "Pin 6 and 7—Relay Contact (Common/Normally Open)".
7	Relay Contact - Normally Open[b]. See Section 2.3.1.2, "Pin 6 and 7—Relay Contact (Common/Normally Open)".

a. The 600-Ohm audio output of the page port is also suited for interfaces with lower input impedances.
b. 1 Amp at 30 VDC for continuous loads

2.3.1.1 Pin 3, 4, and 5—Positive/Negative 600-Ohm Audio Output/Audio Ground Reference

This output allows direct connection to paging amplifiers requiring a "Page Port" type input that meets a balanced 600 Ohm 10Vpp signal.

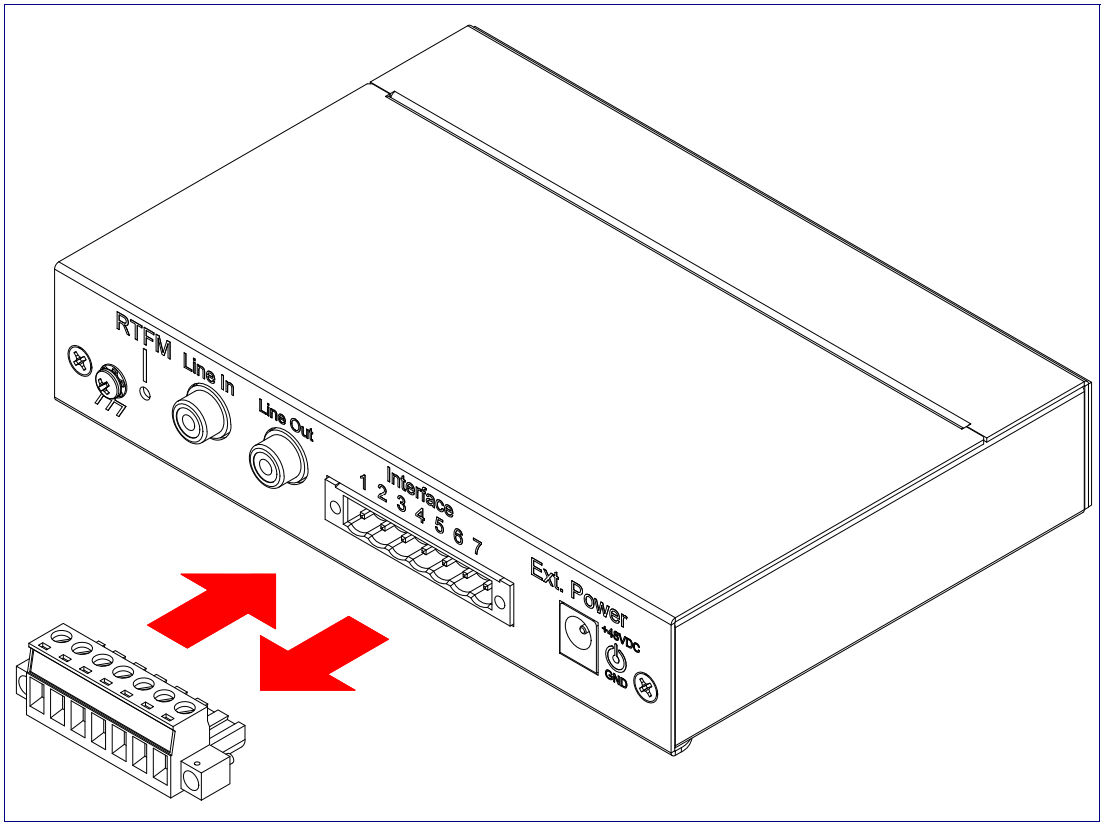
2.3.1.2 Pin 6 and 7—Relay Contact (Common/Normally Open)

When enabled on the web interface (Section 2.4.2, "Configure the Device Parameters"), every time an audio file is played out of the local line-out or 600 Ohm output, the relay will close, thereby enabling amplifiers with a remote turn-on capability to become active.

2.3.2 Removable Connector

Figure 2-5 shows the connector that is removable on the Singlewire Paging Adapter.

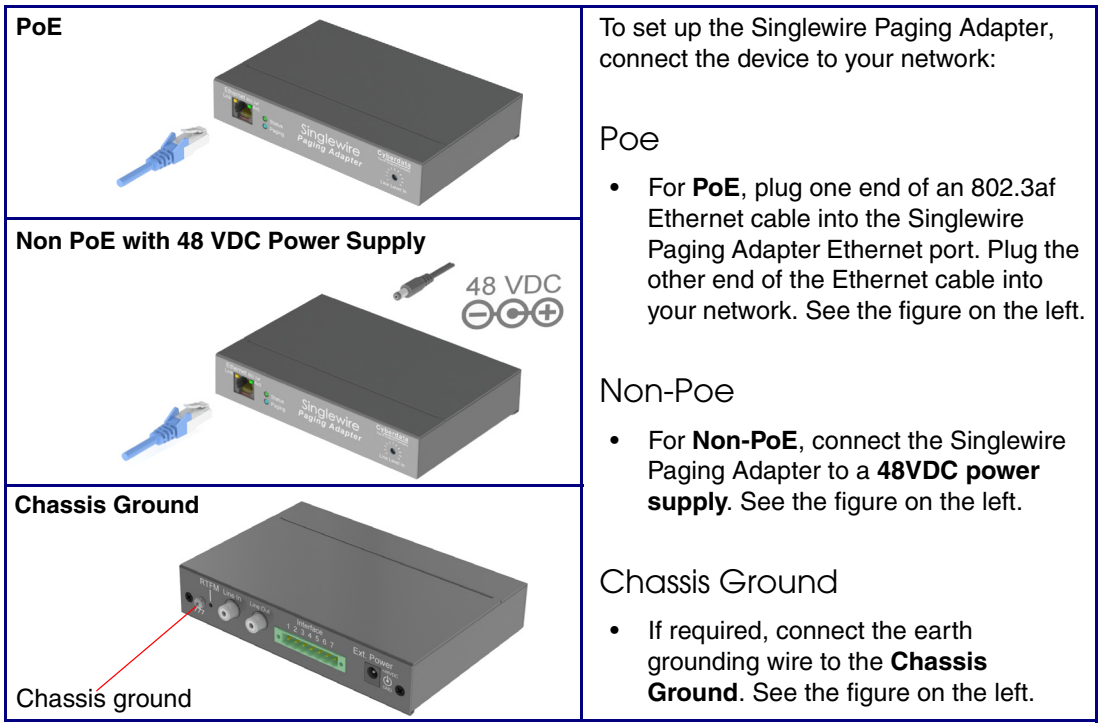
Figure 2-5. Removable Connector



2.3.3 Connect to the Power Source

To use PoE, plug a Cat 5 Ethernet cable from the Singlewire Paging Adapter **Ethernet** port to your network. As an alternative to PoE, you can plug one end of a +48V DC power supply into the SIP Paging Adapter, and plug the other end into a receptacle. If required, connect the earth grounding wire to the chassis ground on the back of the unit. See Figure 2-6.

Figure 2-6. Connecting to the Power Source



To set up the Singlewire Paging Adapter, connect the device to your network:

Poe

- For **PoE**, plug one end of an 802.3af Ethernet cable into the Singlewire Paging Adapter Ethernet port. Plug the other end of the Ethernet cable into your network. See the figure on the left.

Non-Poe

- For **Non-PoE**, connect the Singlewire Paging Adapter to a **48VDC power supply**. See the figure on the left.

Chassis Ground

- If required, connect the earth grounding wire to the **Chassis Ground**. See the figure on the left.

2.3.4 Connect to the Network

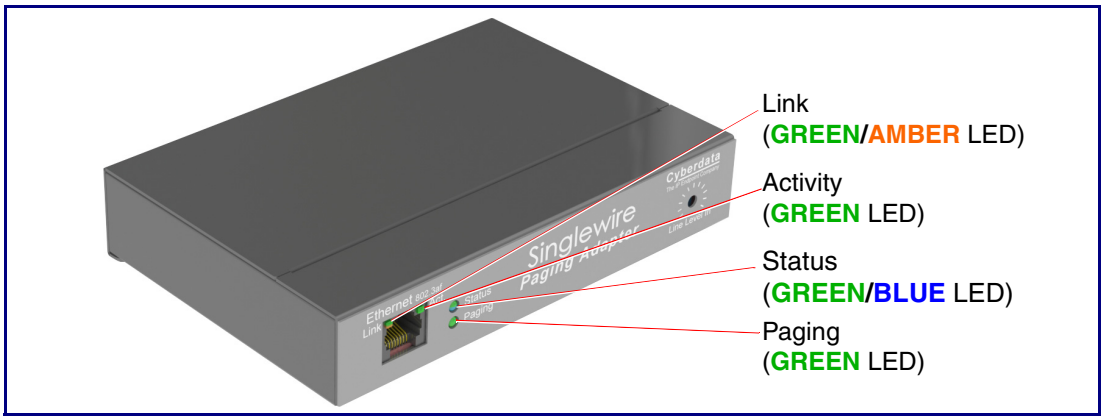
Plug one end of a standard Ethernet cable into the SIP Paging Adapter **Ethernet** port. Plug the other end into your network.

Figure 2-7. Connecting to the Network

2.3.5 Confirm that the Singlewire Paging Adapter is Up and Running

The LEDs on the front of the Singlewire Paging Adapter verify the unit's operations.

Figure 2-8. SIP Paging Adapter LEDs



2.3.5.1 Confirm Power on, Network Connectivity, and Connection Speed

When you plug in the Ethernet cable or power supply:

- The **GREEN/BLUE Status** LED and the **GREEN Paging** LED both blink at a rate of 10 times per second during the initial network setup.
- The round, **GREEN/BLUE Status** LED on the front of the Singlewire Paging Adapter comes on indicating that the power is on. Once the device has been initialized, this LED blinks at one second intervals.
- The square, **GREEN/AMBER Link** LED above the Ethernet port indicates that the network connection has been established. The Link LED changes color to confirm the auto-negotiated connection speed:
  - The Link LED is **GREEN** at 10 Mbps.
  - The Link LED is **AMBER** at 100 Mbps.
- The **GREEN Paging** LED comes on after the device is booted and initialized. This LED blinks when a page is in progress. You can disable **Beep on Initialization** on the **Device Configuration** page.

2.3.5.2 Verify Network Activity

The square, **GREEN Activity** LED blinks when there is network traffic.

2.3.6 Announcing the IP Address

To announce the IP address for the Singlewire Paging Adapter, briefly press and then quickly release the **RTFM** switch. See Figure 2-9.

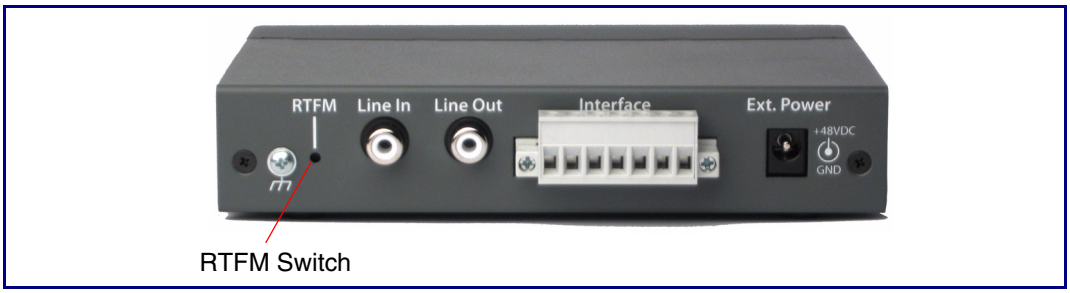
Note The IP address announcement can be heard if a speaker or amplified speaker is connected to the unit.

Figure 2-9. RTFM Switch

2.3.7 Restore the Factory Default Settings

The Singlewire Paging Adapter is delivered with factory set default values for the parameters in Table 2-3. Use the **RTFM** switch (see Figure 2-10) on the back of the unit to restore these parameters to the factory default settings.

Figure 2-10. RTFM Switch



Note When you perform this procedure, the factory default settings are restored. The default parameters for access are shown in Table 2-3.

Table 2-3. Factory Default Settings

Parameter	Factory Default Setting
IP Addressing	DHCP
IP Address[a]	10.10.10.10
Web Access Username	admin
Web Access Password	admin
Subnet Mask[a]	255.0.0.0
Default Gateway[a]	10.0.0.1

a. Default if there is not a DHCP server present.

To restore these parameters to the factory default settings:

1. Press and hold the **RTFM** switch until the status and paging lights come on.
2. Continue to press the switch until after the indicator lights go off, and then release it.

Note The “Restoring Defaults” announcement can be heard if a speaker or amplified speaker is connected to the unit.

3. The Singlewire Paging Adapter settings are restored to the factory defaults.

2.4 Configure the Device Parameters

To configure the device online, use a standard web browser.

Configuration of the device is taken care of by the InformaCast server. If an InformaCast server can not be found, the device will return to factory defaults as shown in Table 2-4..

Table 2-4. Factory Default Settings

Parameter	Factory Default Setting
IP Addressing	DHCP
IP Address[a]	10.10.10.10
Web Access Username	admin
Web Access Password	admin
Subnet Mask[a]	255.0.0.0
Default Gateway[a]	10.0.0.1

a. Default if there is not a DHCP server present.

2.4.1 Log in to the Configuration Home Page

1. Open your browser to the Singlewire Paging Adapter IP address. This can be found within the InformaCast Server Test Menu.

Note If the network does not have access to a DHCP server, the device will default to an IP address of 10.10.10.10.

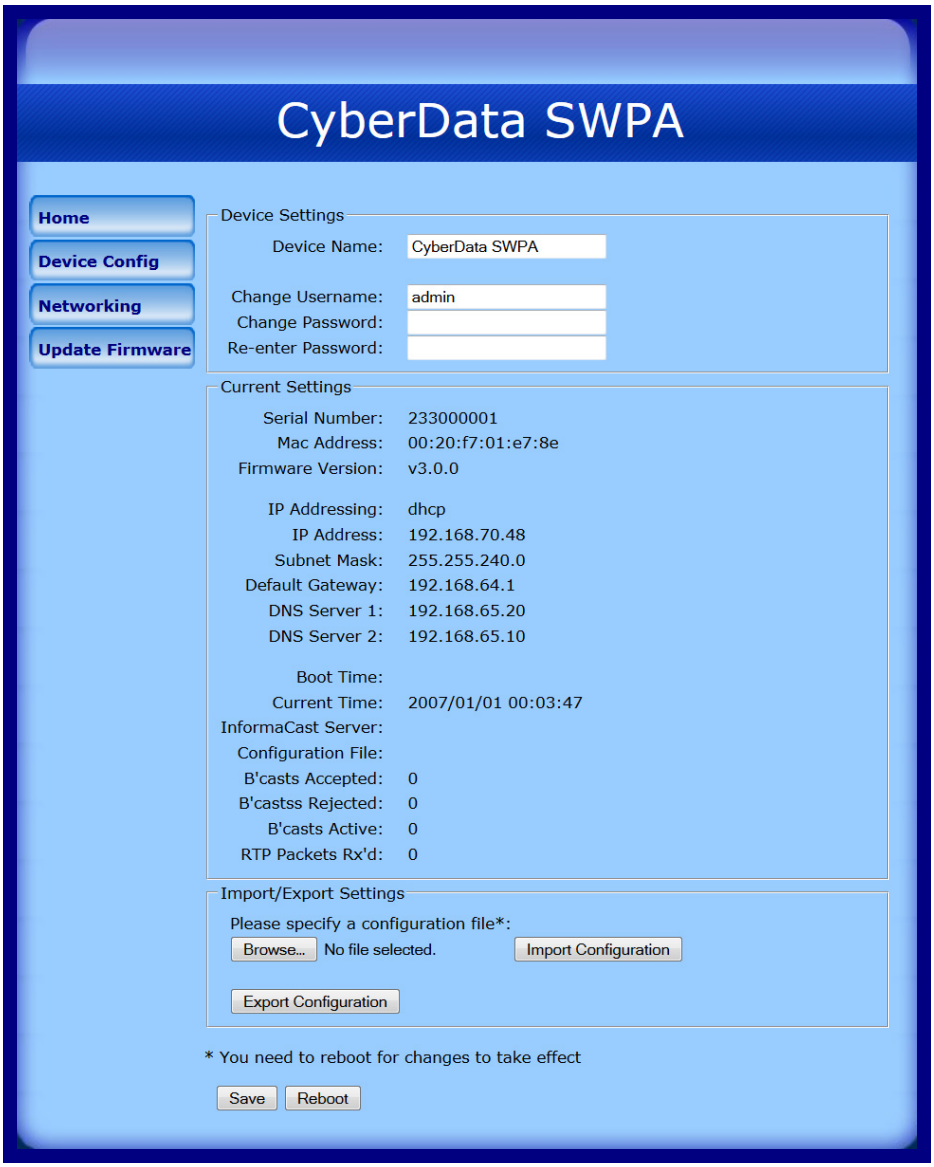
Note Make sure that the PC is on the same IP network as the Singlewire Paging Adapter.

2. When prompted, use the following default **Web Access Username** and **Web Access Password** to access the **Home Page** (Figure 2-11):

   Web Access Username: **admin**

   Web Access Password: **admin**

Figure 2-11. Home Page



3. On the **Home Page**, review the setup details and navigation buttons described in Table 2-5.

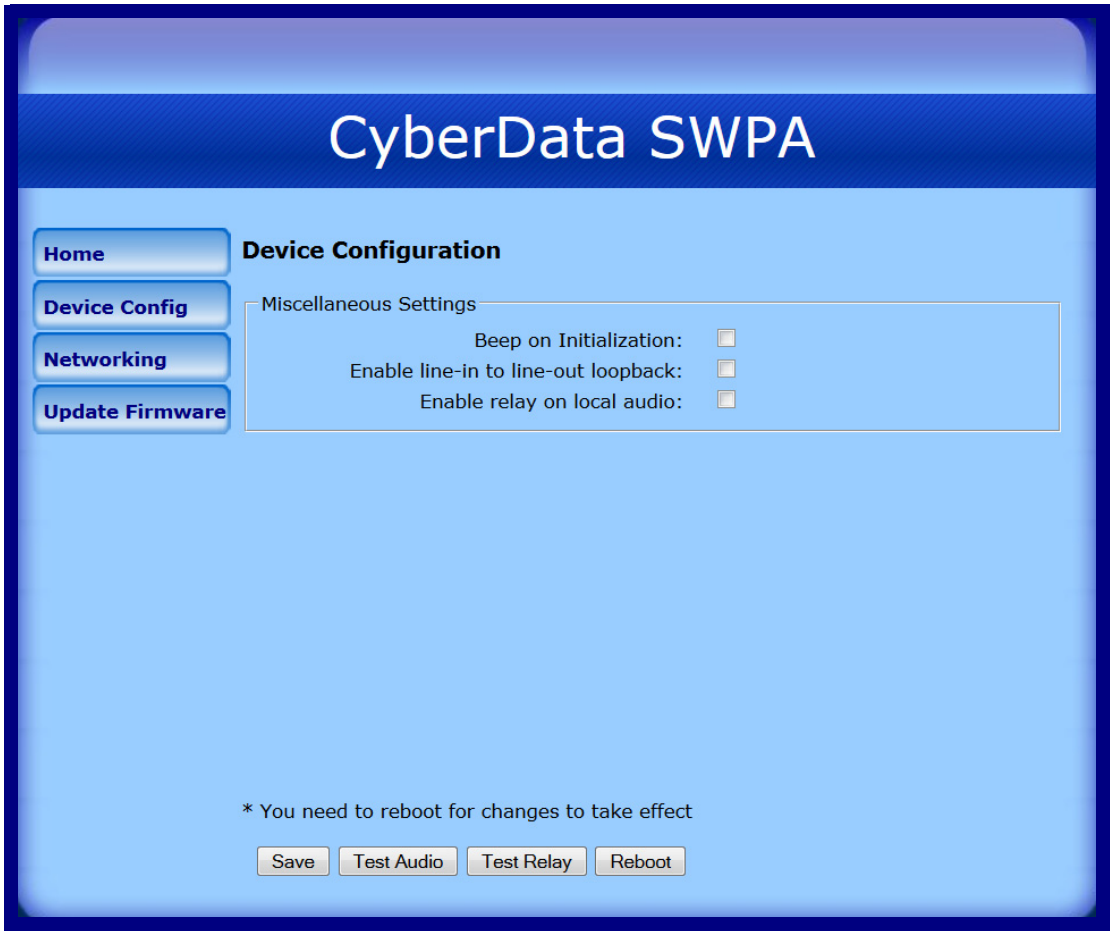
Table 2-5. Home Page Overview

Web Page Item	Description
Device Settings	
Change Username	Type in this field to change the username (25 character limit).
Change Password	Type in this field to change the password (19 character limit).
Re-enter Password	Type the password again in this field to confirm the new password (19 character limit).
Current Settings	
Serial Number	Shows the device serial number.
Mac Address	Shows the device Mac address.
Firmware Version	Shows the current firmware version.
IP Addressing	Shows the current IP addressing setting (**DHCP** or **Static**).
IP Address	Shows the current IP address.
Subnet Mask	Shows the current subnet mask address.
DNS Server 1	Shows the current DNS Server 1 address.
DNS Server 2	Shows the current DNS Server 2 address.
Boot Time	Shows the boot time.
Current Time	Shows the current time.
InformaCast Server	Shows the InformaCast Server IP address.
Configuration File	Shows the configuration file.
B'casts Accepted	Shows the number of B'casts accepted.
B'casts Rejected	Shows the number of B'casts rejected.
B'casts Active	Shows the number of active B'casts.
RTP Packets Rx'd	Shows the number of RTP packets Rx'd.
Import/Export Settings	The user can export and edit the device's configuration (in XML format), and then reload it to a device (or devices) instead of making changes through the web interface.
Browse...	Press the **Browse** button to select a configuration file to import.
Import Configuration	Press the **Import Configuration** button to save a board configuration to the board. **Note**: The board will have to be reset before changes will take effect.
Export Configuration	Press the **Export Configuration** button to download the current board configuration.
Save	Click the **Save** button to save your configuration settings. **Note**: You need to reboot for changes to take effect.
Reboot	Click on the **Reboot** button to reboot the system.

2.4.2 Configure the Device Parameters

1. Click on the **Device Configuration** button to open the **Device Configuration** page. See Figure 2-12.

Figure 2-12. Device Configuration Page



2. On the **Device Configuration** page, you may enter values for the parameters indicated in Table 2-6.

Table 2-6. Device Configuration Parameters

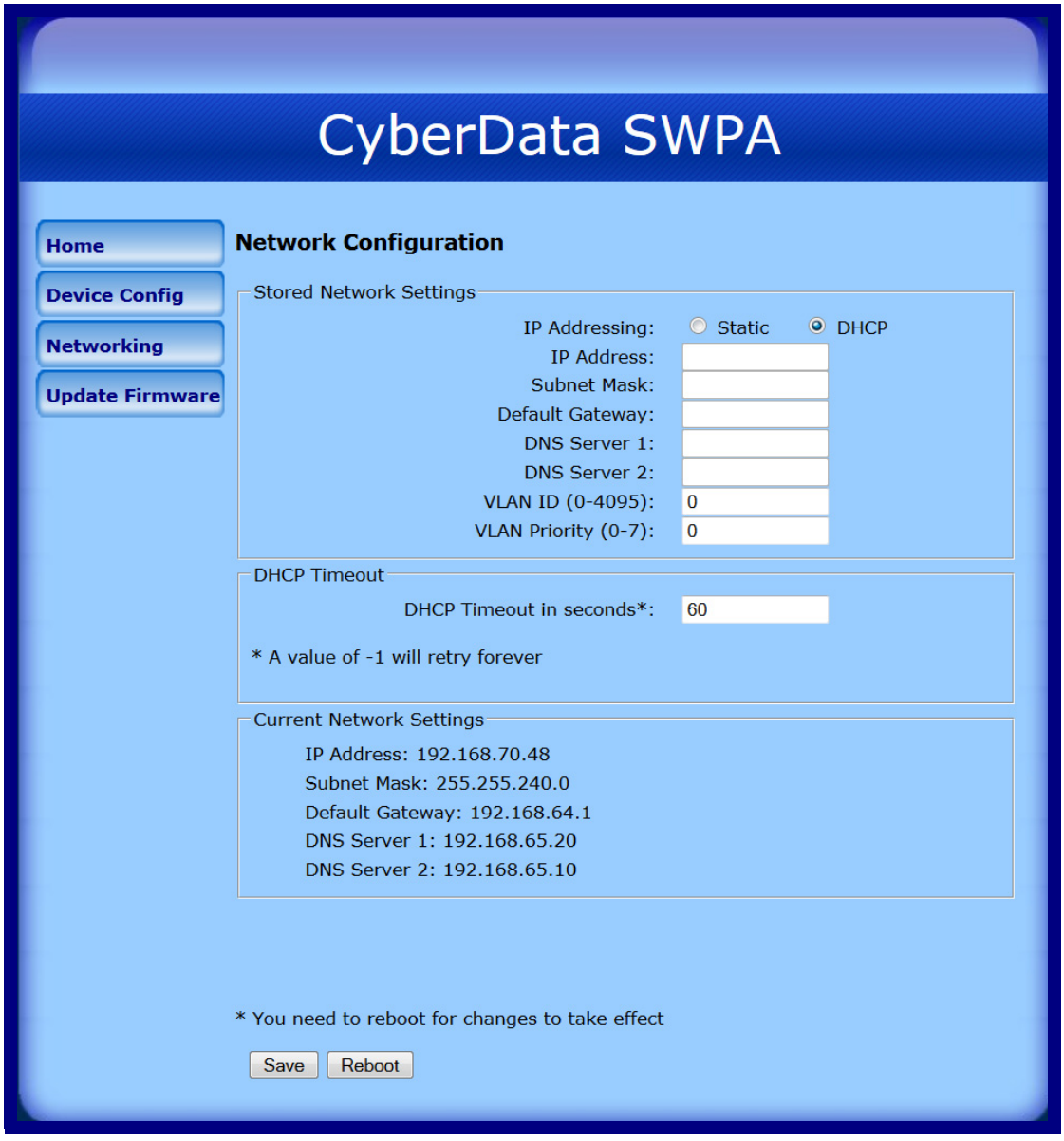
Web Page Item	Description
Miscellaneous Settings	
Beep on Initialization	When selected, you will hear a beep when the device initializes.
Enable line in to line out loopback	When selected, audio is sent from the line -in to the line-out output.
Enable relay on local audio	When selected, the relay will be closed any time that audio is played out of the line-out/page port. This setting is for legacy analog amplifiers that are often connected to the page port. Analog amplifiers will often have a noticeable hum if they are turned on while there is no audio being played. The relay closure causes these amplifiers to turn on only when audio is sent to them.
Save	Click the **Save** button to save your configuration settings. **Note**: You need to reboot for changes to take effect.
Test Audio	When the **Test Audio** button is pressed, you will hear a voice message for testing the device audio quality and volume.
Test Relay	Click on the **Test Relay** button to do a relay test.
Reboot	Click on the **Reboot** button to reboot the system.

3. After changing the parameters, click the **Save** button.

2.4.3 Configure the Network Parameters

Configuring the network parameters enables your network to recognize the Singlewire Paging Adapter and communicate with it. Click on the **Networking** button to open the **Network Configuration** page.

Figure 2-13. Network Configuration Page



On the **Network Configuration** page, enter values for the parameters indicated in Table 2-7.

Table 2-7. Network Configuration Parameters

Web Page Item	Description
Stored Network Settings	Shows the settings stored in non-volatile memory.
IP Addressing	Select either **DHCP IP Addressing** or **Static IP Addressing** by marking the appropriate radio button. If you select **Static**, configure the remaining parameters indicated in Table 2-7. If you select **DHCP**, go to Step 3.
IP Address	Enter the Static IP address.
Subnet Mask	Enter the Subnet Mask address.
Default Gateway	Enter the Default Gateway address.
DNS Server 1	Enter the DNS Server 1 address.
DNS Server 2	Enter the DNS Server 2 address.
VLAN ID (0-4095)	Enter the VLAN ID number. **Note**: The device supports 802.11Q VLAN tagging support. The switch port connected to the device will need to be in “trunking mode” for the VLAN tags to propagate.
VLAN Priority (0-7)	Enter the VLAN priority number.
DHCP Timeout	
DHCP Timeout in seconds	Enter the desired timeout duration (in seconds) that the device will wait for a response from the DHCP server before defaulting back to the stored static IP address. **Note**: A value of **-1** will cause the device to retry indefinitely and a value of **0** will cause the device to reset to a default of 60 seconds.
Current Network Settings	Shows the current network settings.
IP Address	Shows the current Static IP address.
Subnet Mask	Shows the current Subnet Mask address.
Default Gateway	Shows the current Default Gateway address.
DNS Server 1	Shows the current DNS Server 1 address.
DNS Server 2	Shows the current DNS Server 2 address.
Save	Click the **Save** button to save your configuration settings. **Note**: You need to reboot for changes to take effect.
Reboot	Click on the **Reboot** button to reboot the system.

On this page:

1. Specify whether you use **Static** or **DHCP IP Addressing** by marking the appropriate radio button. Then, if you select Static, go to Step 2.
2. For Static IP Addressing, also enter values for the following parameters:
   - The Singlewire Paging Adapter’s **IP Address**: The Singlewire Paging Adapter is delivered with a factory default IP address. Change the default address to the correct IP address for your system.

- The **Subnet Mask.**
- The **Default Gateway.**

3. Click **Save** when you are finished.
4. Click **Reboot** for the new settings to take effect.

2.4.4 Updating the Firmware

Note Updating from firmware versions earlier than 2.0.0 require a factory reset after the update has been completed. This is due to a change in the way that the device stores its configuration file.

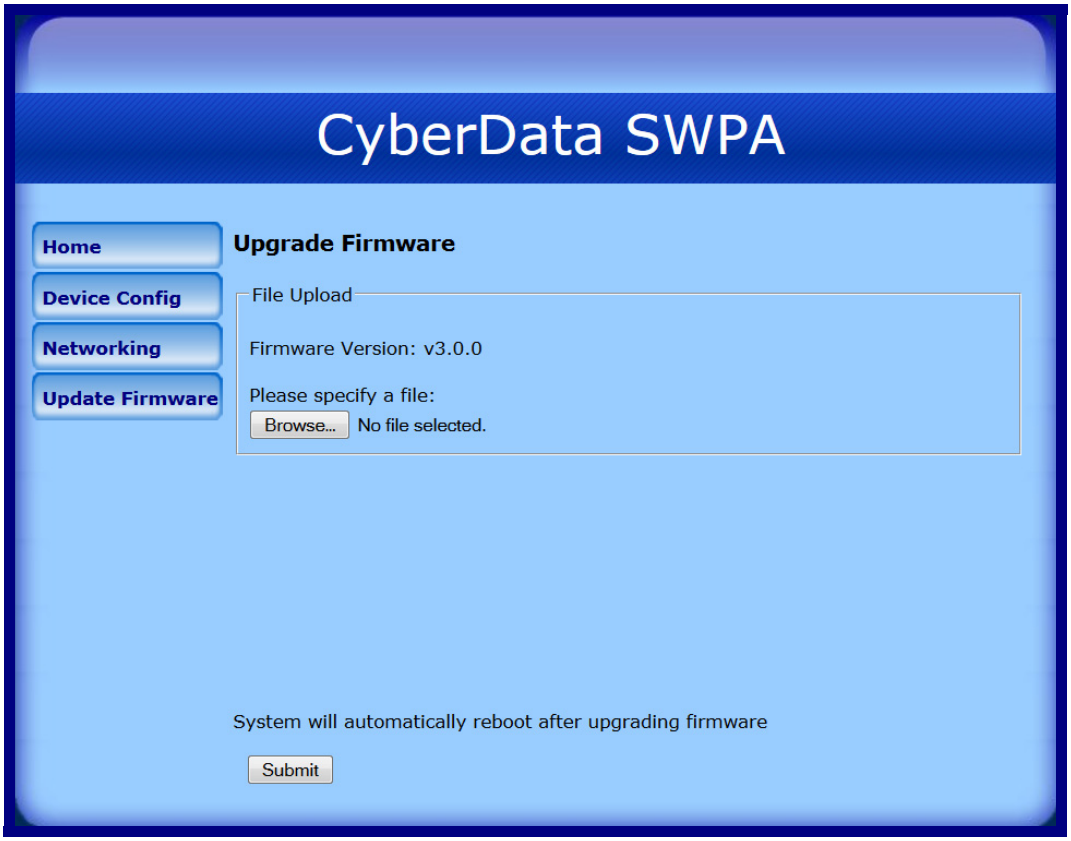
To update the firmware from your computer:

1. Please contact VoIP Technical Support to obtain the latest Singlewire Paging Adapter firmware file by submitting a contact form at the following website:

   http://www.cyberdata.net/support/contactsupportvoip.php

2. Log in to the Singlewire Paging Adapter home page as instructed in Section 2.4.1, "Log in to the Configuration Home Page".

Figure 2-14. Upgrade Firmware Page



3. Select **Browse**, and then navigate to the location of the Singlewire Paging Adapter firmware file.

4. Click **Submit**.

Note Do not reboot the board after pressing the **Submit** button.

Note This starts the update process. Once the Singlewire Paging Adapter has updated the file, the **Firmware** countdown page appears, indicating that the firmware is being written to flash. The Singlewire Paging Adapter will automatically reboot when the upload is complete.

When the countdown finishes, the **Upgrade Firmware** page will refresh. The uploaded firmware filename should be displayed in the system configuration (indicating successful upload and reboot).

Table 2-8 shows the web page items on the **Upgrade Firmware** page.

Table 2-8. Firmware Upgrade Parameters

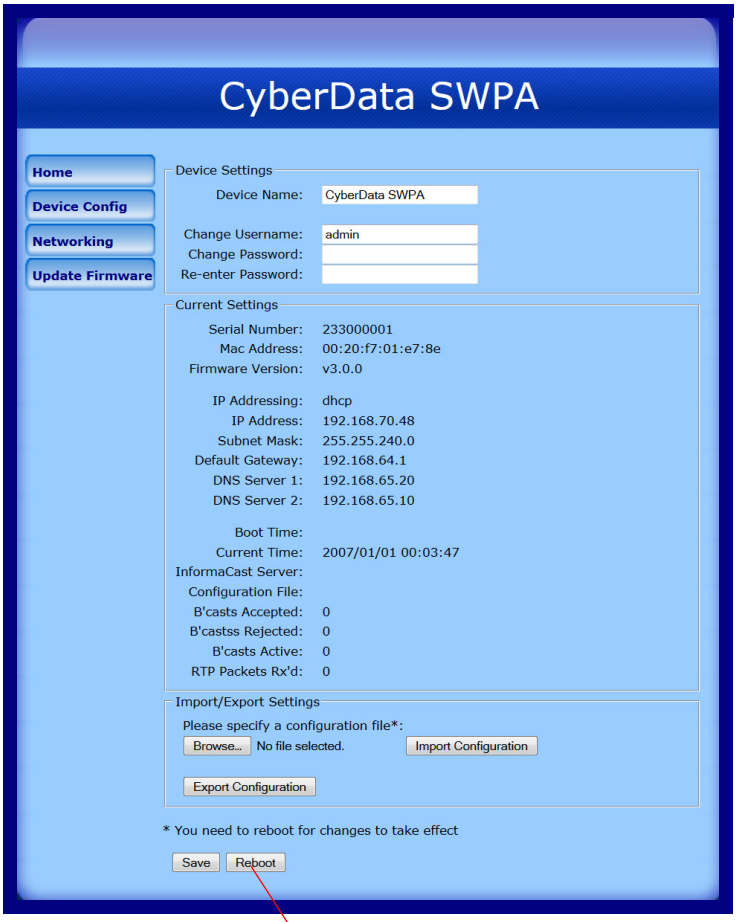
Web Page Item	Description
File Upload	
Firmware Version	Shows the current firmware version.
Browse...	Use the **Browse** button to navigate to the location of the firmware file that you want to upload.
Submit	Click on the **Submit** button to automatically upload the selected firmware and reboot the system.

2.4.5 Reboot the Singlewire Paging Adapter

To reboot a Singlewire Paging Adapter, log in to the web page as instructed in Section 2.4.1, "Log in to the Configuration Home Page".

1. Click the **Reboot** button (Figure 2-15).

Figure 2-15. Reboot Button



Reboot button

2. Click **Reboot**. A normal restart will occur and you will see the following **Reboot** page.

Figure 2-16. Reboot Page

2.5 Identifying and Testing a Device when Using InformaCast 4.0 or Later

This section describes the basic process for identifying and testing the CyberData device when using Singlewire's InformaCast software version 4.0 or later.

Note If you have questions or need help, please consult your InformaCast documentation and or contact the CyberData support team.

Note CyberData's support is limited to IP endpoint functionality when used with an InformaCast system.

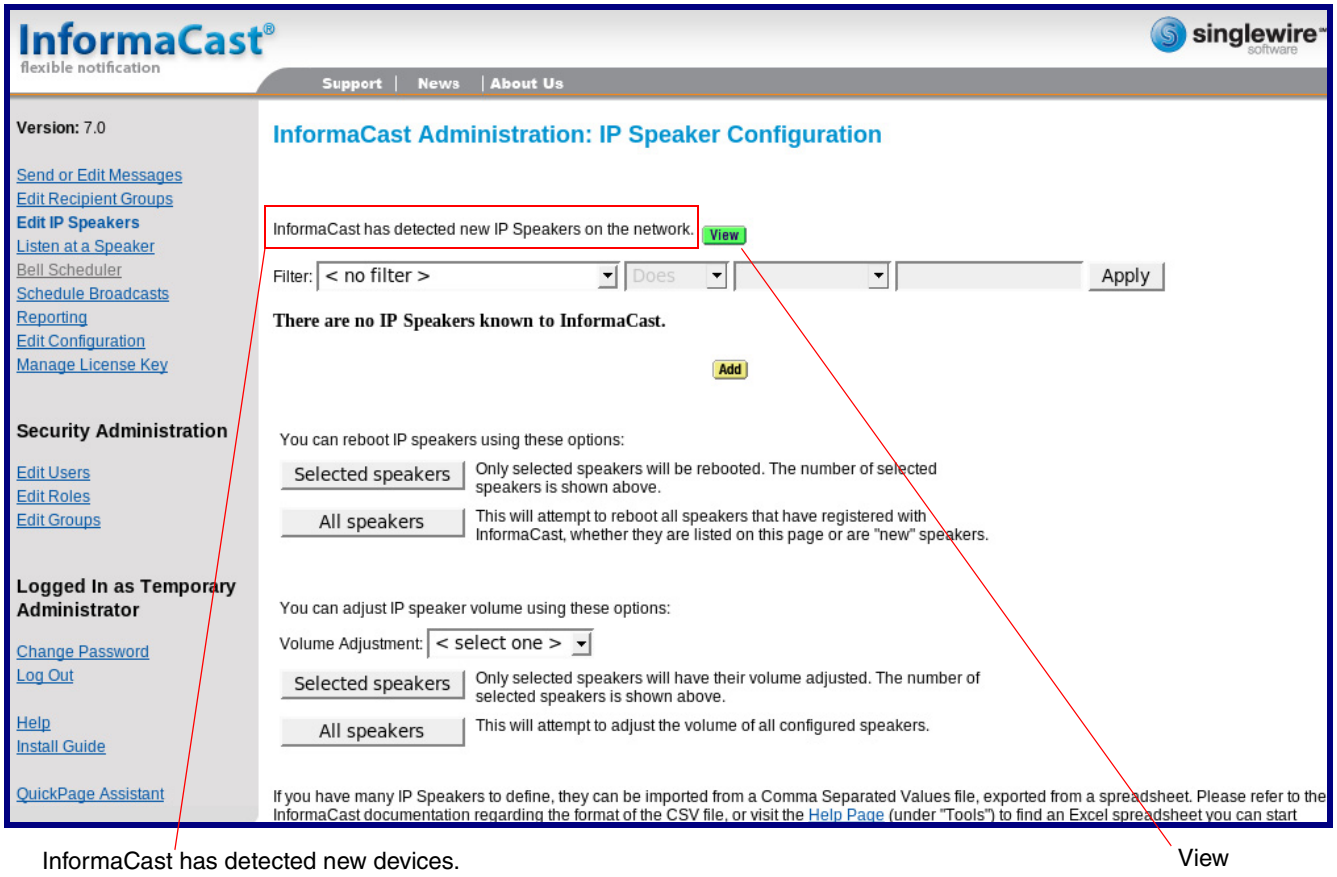
To add the Singlewire Paging Adapter to the InformaCast server:

1. Click **Edit IP Speakers** on the **Main Screen** of the **Singlewire Informacast Server Web Interface**.

Figure 2-17. Main Screen of the Singlewire InformaCast Server Web Interface

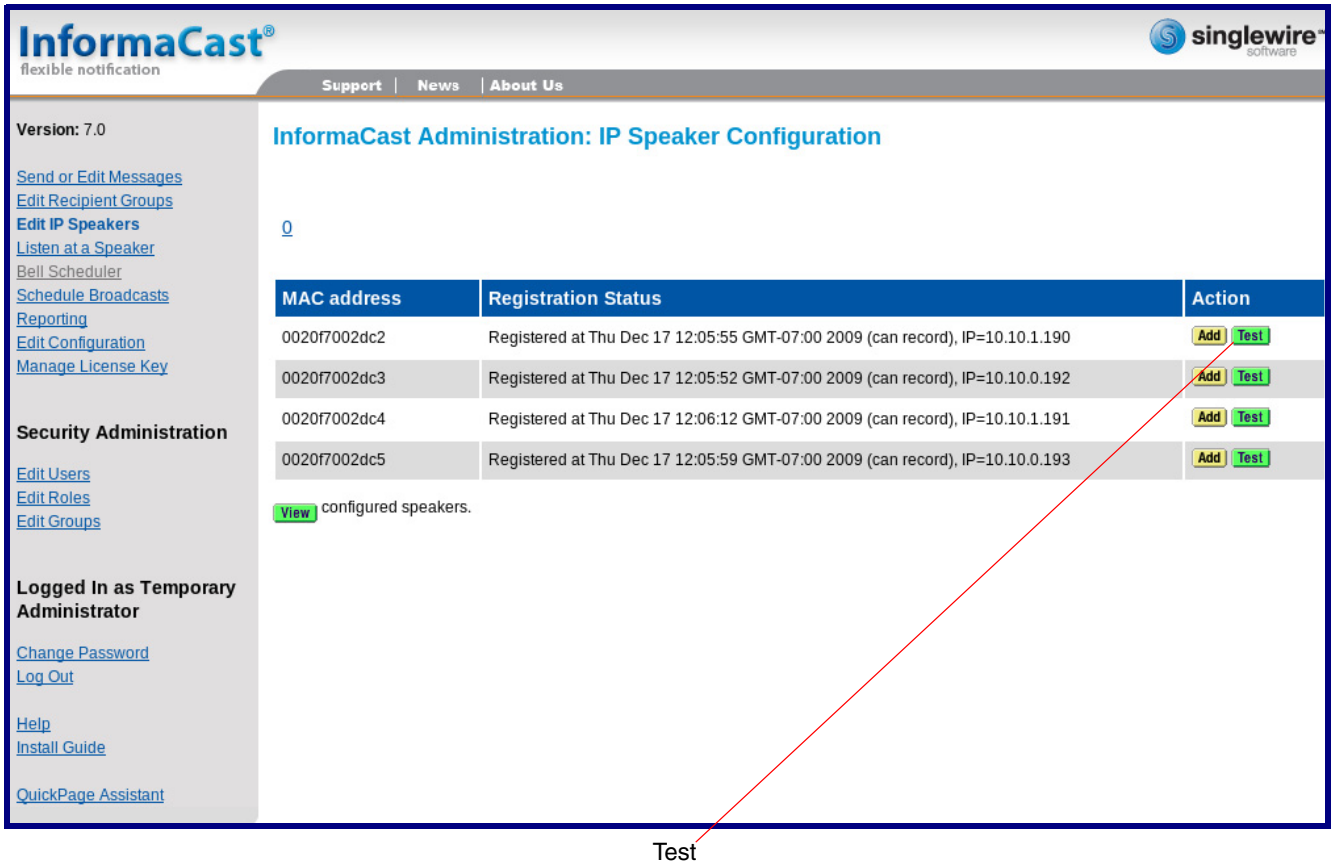
2. On the **IP Speaker Configuration** page, InformaCast will indicate that it has detected new speakers. Click **View**.

Figure 2-18. IP Speaker Configuration Page


InformaCast
flexible notification
singlewire
software
Support | News | About Us
Version: 7.0
Send or Edit Messages
Edit Recipient Groups
Edit IP Speakers
Listen at a Speaker
Bell Scheduler
Schedule Broadcasts
Reporting
Edit Configuration
Manage License Key
Security Administration
Edit Users
Edit Roles
Edit Groups
Logged In as Temporary Administrator
Change Password
Log Out
Help
Install Guide
QuickPage Assistant
InformaCast Administration: IP Speaker Configuration
InformaCast has detected new IP Speakers on the network.
View
Filter: < no filter >
Does
Apply
There are no IP Speakers known to InformaCast.
Add
You can reboot IP speakers using these options:
Selected speakers
Only selected speakers will be rebooted. The number of selected speakers is shown above.
All speakers
This will attempt to reboot all speakers that have registered with InformaCast, whether they are listed on this page or are "new" speakers.
You can adjust IP speaker volume using these options:
Volume Adjustment: < select one >
Selected speakers
Only selected speakers will have their volume adjusted. The number of selected speakers is shown above.
All speakers
This will attempt to adjust the volume of all configured speakers.
If you have many IP Speakers to define, they can be imported from a Comma Separated Values file, exported from a spreadsheet. Please refer to the InformaCast documentation regarding the format of the CSV file, or visit the Help Page (under "Tools") to find an Excel spreadsheet you can start
InformaCast has detected new devices.
View

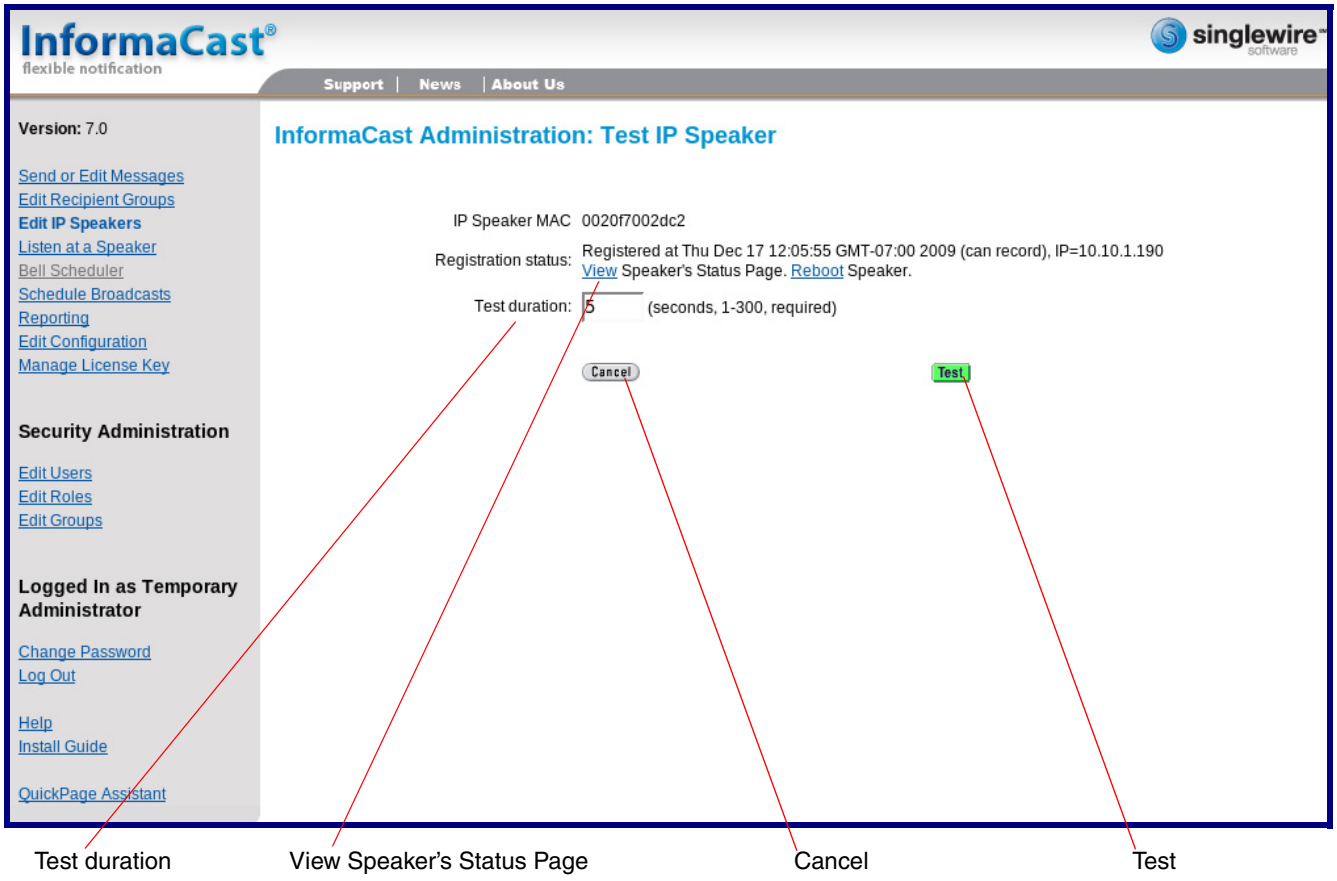
3. The **IP Speaker Configuration** page will show four newly detected speakers. Click **Test**.

Figure 2-19. IP Speaker Configuration Page



4. On the **Test IP Speaker** page, Enter a number into the **Test duration** field.
5. Click **Test**.
6. You will hear a tone from the speaker being testing.
7. After the test, click **Cancel** to return to the **IP Configuration** page.

Figure 2-20. Test IP Speaker Page



Note When viewing the device's status page via Informacast, Informacast links to the wrong port and path.

Informacast expects our device's status page to be at:

http://<ipaddr>:10004/status.

The status page is actually at:

http://<ipaddr>/ (port 80)

Therefore, if a user clicks the link to view the status page and is directed to:

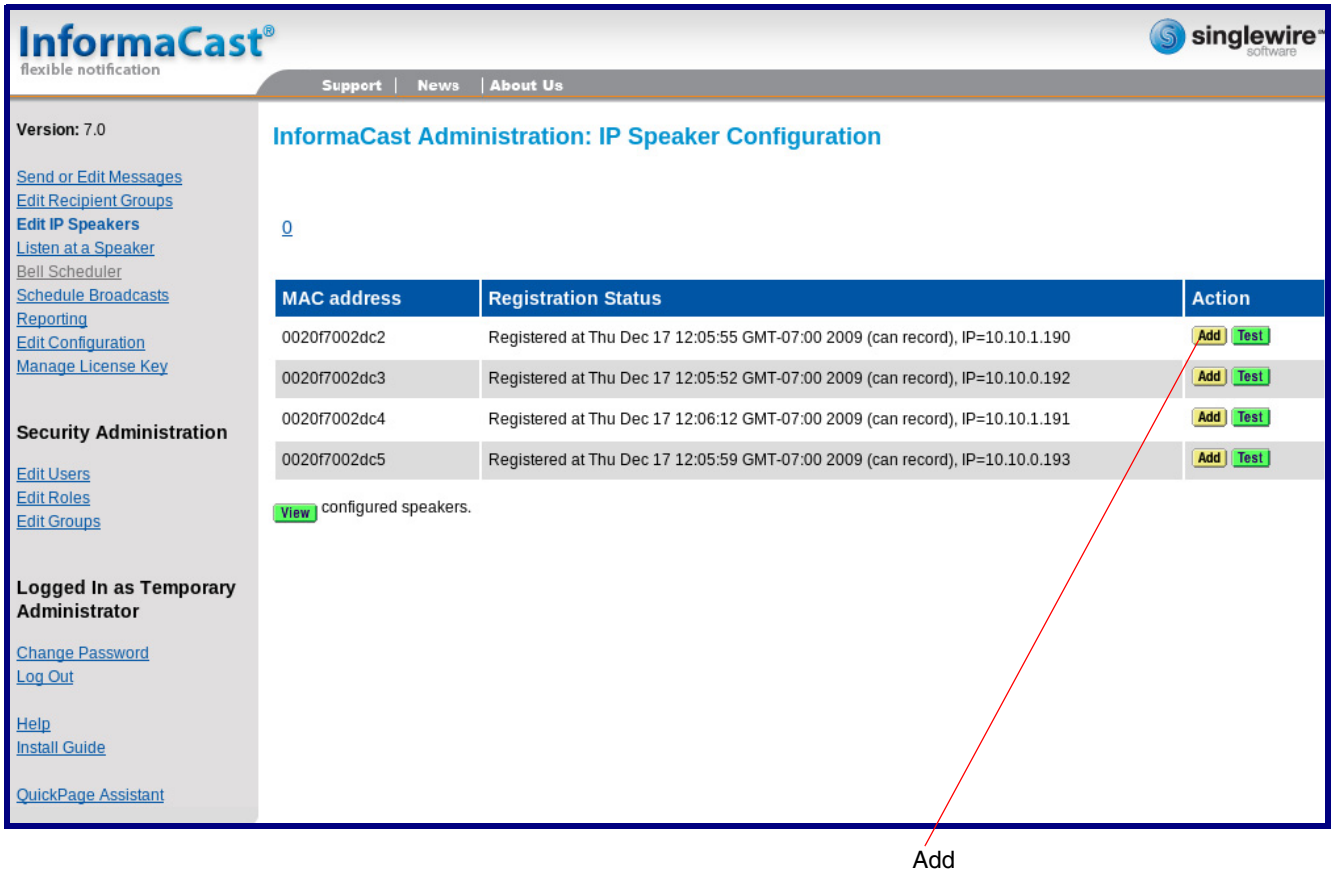
http://10.10.10.10:1004/status

The user will need to edit the url in the address bar to:

http://10.10.10.10/

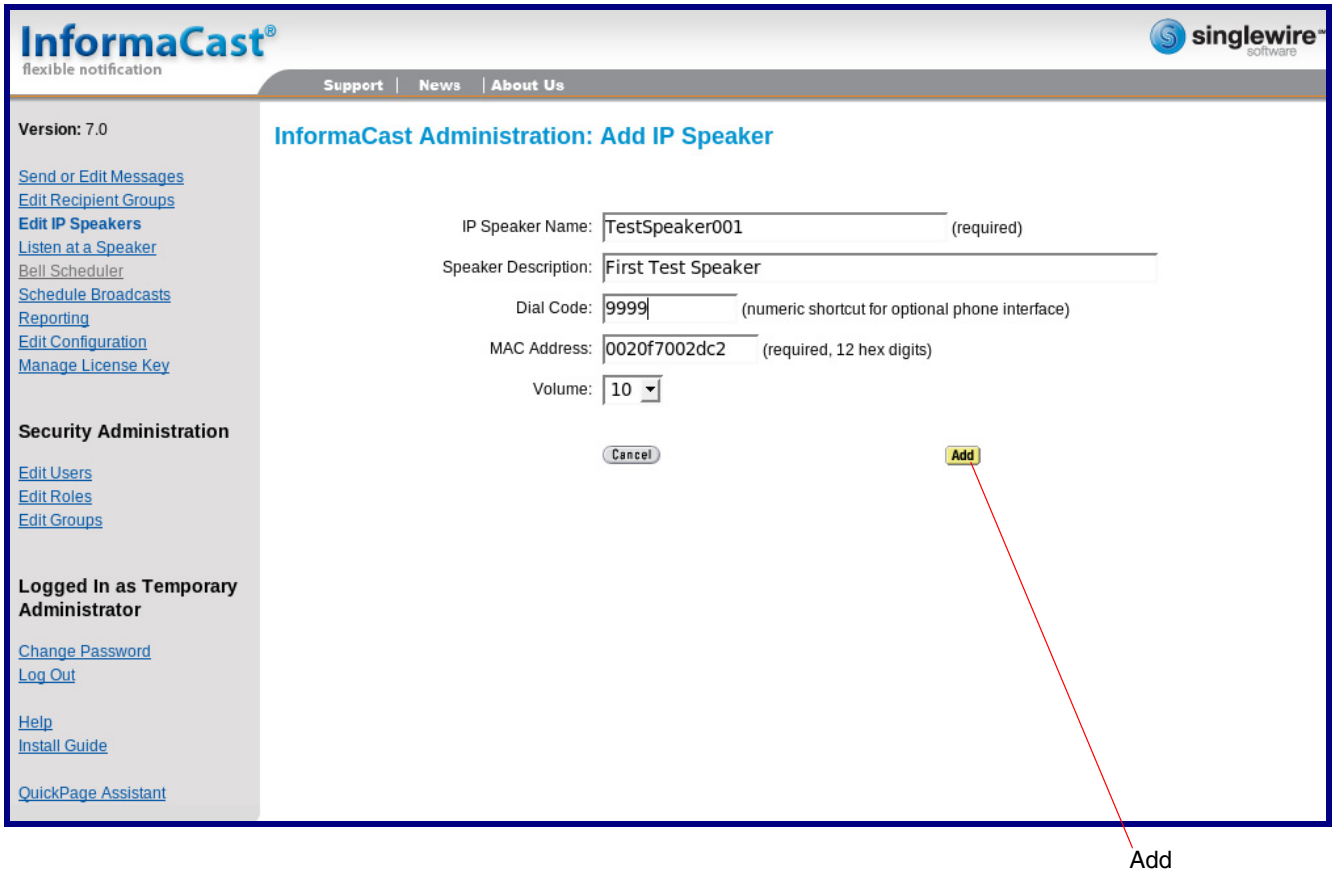
8. On the **IP Speaker Configuration** page, Click **Add** to add a speaker to the InformaCast server.

Figure 2-21. IP Configuration Page



9. On the **Add IP Speaker** page, Fill out appropriate fields and click **Add**.

Figure 2-22. Add IP Speaker Page



Your device is now registered to the InformaCast server. You now can configure this device as part of the InformaCast system setup as required.

Appendix A: Setting up a TFTP Server

A.1 In a LINUX Environment

To set up a TFTP server on LINUX:

1. Create a directory dedicated to the TFTP server, and move the files to be uploaded to that directory.
2. Run the following command where `/tftpboot/` is the path to the directory you created in Step 1: the directory that contains the files to be uploaded. For example:

   ```
   in.tftpd -l -s /tftpboot/your_directory_name
   ```

A.2 In a Windows Environment

You can find several options online for setting up a Windows TFTP server. This example explains how to use the Solarwinds freeware TFTP server, which you can download at:

http://www.cyberdata.net/support/voip/solarwinds.html

To set up a TFTP server on Windows:

1. Install and start the software.
2. Select **File**/**Configure**/**Security** tab/**Transmit Only**.
3. Make a note of the default directory name, and then move the firmware files to be uploaded to that directory.

Appendix B: Troubleshooting/Technical Support

B.1 Frequently Asked Questions (FAQ)

To see a list of frequently asked questions, go to the following URL:

http://www.cyberdata.net/products/voip/digitalanalog/singlewirepagingadapter/faqs.html

B.2 Documentation

The documentation for this product is released in an English language version only. You can download PDF copies of CyberData product documentation by going to the following URL:

http://www.cyberdata.net/products/voip/digitalanalog/singlewirepagingadapter/docs.html

B.3 Contact Information

Contact

CyberData Corporation
3 Justin Court
Monterey, CA 93940 USA
www.CyberData.net
Phone: 800-CYBERDATA (800-292-3732)
Fax: 831-373-4193

Sales

Sales 831-373-2601 Extension 334

Technical Support

The fastest way to get technical support for your VoIP product is to submit a VoIP Technical Support form at the following website:

http://www.cyberdata.net/support/contactsupportvoip.php

The Support Form initiates a ticket which CyberData uses for tracking customer requests. Most importantly, the Support Form tells us which PBX system and software version that you are using, the make and model of the switch, and other important information. This information is essential for troubleshooting. Please also include as much detail as possible in the **Comments** section of the Support Form.

Phone: (831) 373-2601, Ext. 333
Email: support@cyberdata.net

Returned Materials Authorization

To return the product, contact the Returned Materials Authorization (RMA) department:

Phone: 831-373-2601, Extension 136
Email: RMA@CyberData.net

When returning a product to CyberData, an approved CyberData RMA number must be printed on the outside of the original shipping package. Also, RMA numbers require an active VoIP Technical Support ticket number. A product will not be accepted for return without an approved RMA number. Send the product, in its original package, to the following address:

CyberData Corporation
3 Justin Court
Monterey, CA 93940
Attention: RMA "your RMA number"

RMA Status Form

If you need to inquire about the repair status of your product(s), please use the CyberData RMA Status form at the following web address:

http://www.cyberdata.net/support/rmastatus.html

B.4 Warranty

CyberData warrants its product against defects in material or workmanship for a period of two years from the date of purchase. Should the product fail Within Warranty, CyberData will repair or replace the product free of charge. This warranty includes all parts and labor.

Should the product fail Out of the Warranty period, a flat rate repair charge of one half of the purchase price of the product will be assessed. Repairs that are Within Warranty period but are damaged by improper installation, modification, or abuse are deemed Out of Warranty and will be charged at the Out of Warranty rate. A device is deemed Out of Warranty when its purchase date is longer than two years or when the device has been damaged due to human error during installation, modification, or abuse. A replacement unit will be offered at full cost if the device cannot be repaired.

End of Life Devices are included under this policy. End of Life devices are devices that are no longer produced or sold. Technical support is still available for these devices. However, no firmware revisions or updates will be provided. If an End of Life device cannot be repaired, the replacement offered may be the current version of the device.

Products shipped to CyberData, both within and out of warranty, are shipped at the expense of the customer. CyberData will pay return shipping charges for repaired products.

CyberData shall not under any circumstances be liable to any person for any special, incidental, indirect or consequential damages, including without limitation, damages resulting from use or malfunction of the products, loss of profits or revenues or costs of replacement goods, even if CyberData is informed in advance of the possibility of such damages.

B.4.1 Warranty & RMA Returns within the United States

If service is required, you must contact CyberData Technical Support prior to returning any products to CyberData. Our Technical Support staff will determine if your product should be returned to us for further inspection. If Technical Support determines that your product needs to be returned to CyberData, an RMA number will be issued to you at this point.

Your issued RMA number must be printed on the outside of the shipping box. No product will be accepted for return without an approved RMA number. The product in its original package should be sent to the following address:

CyberData Corporation

3 Justin Court.

Monterey, CA 93940

Attn: RMA "xxxxxx"

B.4.2 Warranty & RMA Returns outside of the United States

If you purchased your equipment through an authorized international distributor or reseller, please contact them directly for product repairs.

B.4.3 Spare in the Air Policy

CyberData now offers a *Spare in the Air* no wait policy for warranty returns within the United States and Canada. More information about the *Spare in the Air* policy is available at the following web address:

http://www.cyberdata.net/support/warranty/spareintheair.html

B.4.4 Return and Restocking Policy

For our authorized distributors and resellers, please refer to your CyberData Service Agreement for information on our return guidelines and procedures.

For End Users, please contact the company that you purchased your equipment from for their return policy.

B.4.5 Warranty and RMA Returns Page

The most recent warranty and RMA information is available at the CyberData Warranty and RMA Returns Page at the following web address:

http://www.cyberdata.net/support/warranty/index.html

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